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NOTES ON DATA FILE EXCHANGE BETWEEN THE NRL TIASC AND THE DTNSR--ETC(U)
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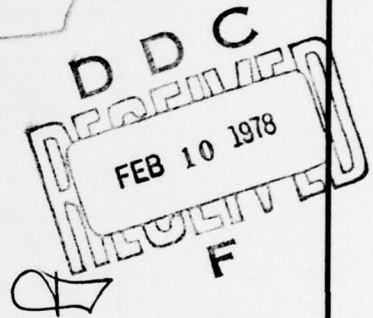
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6 NOTES ON DATA FILE EXCHANGE BETWEEN THE
NRL TIASC AND THE DTNSRDC CDC-66/6700.

10 Paul E. Morawski



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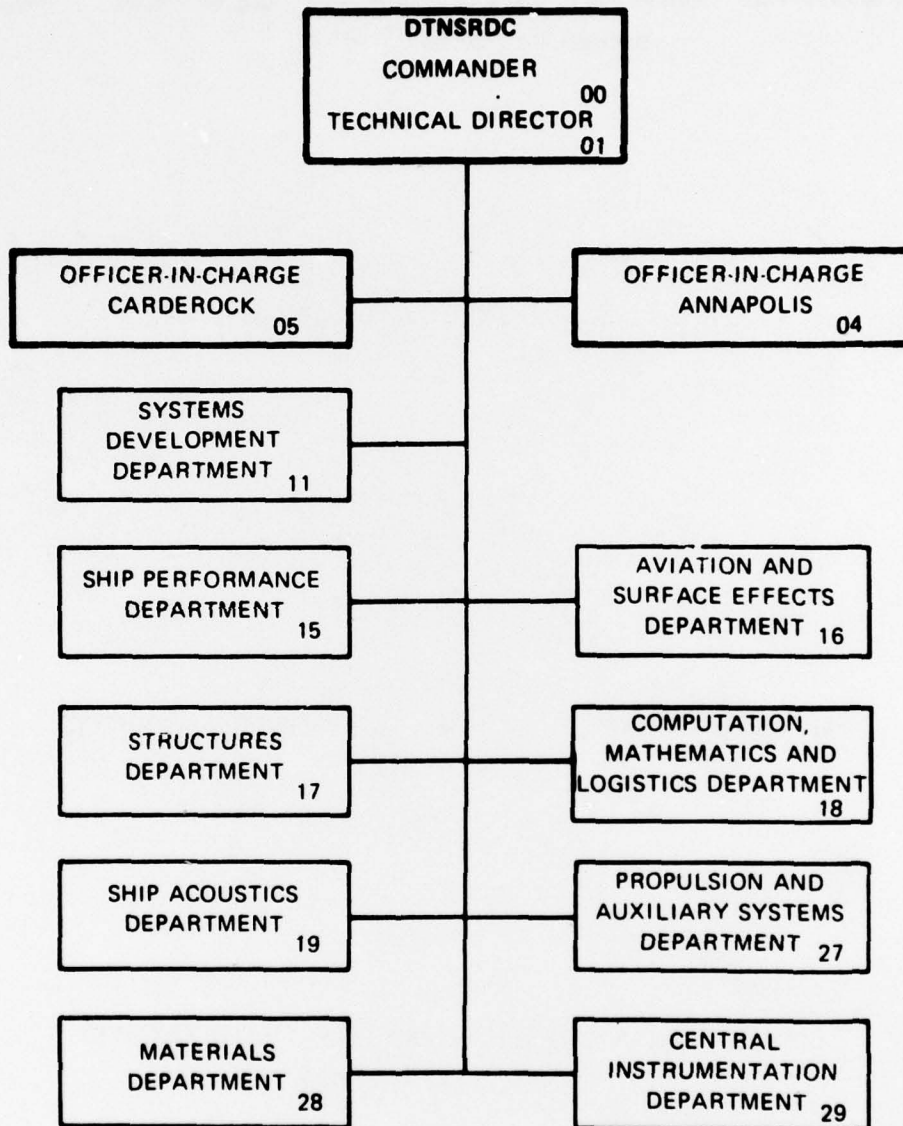


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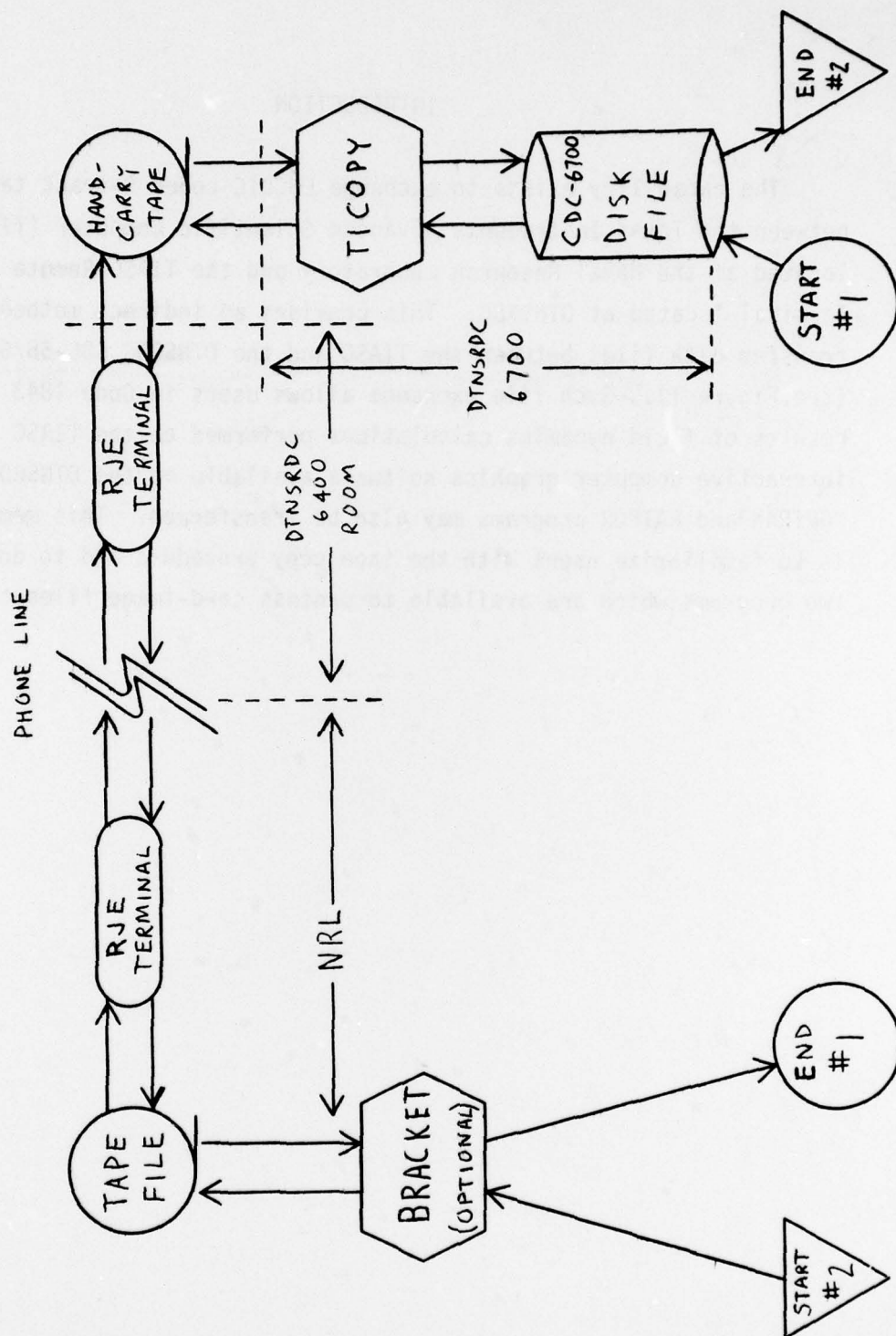
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INTRODUCTION

↘ The capability exists to exchange EBCDIC coded 9-track tape files between the Texas Instruments Advanced Scientific Computer (TIASC) located at the Naval Research Laboratory and the TIASC Remote Job Entry Terminal located at DTNSRDC. This provides an indirect method to transfer data files between the TIASC and the DTNSRDC CDC-66/6700 computers.) (see Figure 1). ↘ Such file exchange allows users in Code 1843 to display results of fluid dynamics calculations performed on the TIASC using interactive computer graphics software available on the DTNSRDC CDC-66/6700. FORTRAN and RATFOR programs may also be transferred. This memorandum is to familiarize users with the tape copy procedure and to document the two programs which are available to process card-image files to be transferred. ↗

FIGURE 1 - FLOW OF INFORMATION BETWEEN NRL AND
DTNSRDC USING TAPE COPY FACILITY



FILE PREPARATION

A BEGIN/REVERT procedure called TICOPY is available on the DTNSRDC CDC-66/6700 computers to either automatically generate a TIASC-compatible tape from a cataloged file, or to create a cataloged file from a TIASC tape. This procedure is documented in Appendix 1.

Tape preparation at the TIASC is more direct. A typical TIASC Job Specification Language setup which produces a transferable tape file might look like this:

```
/BJOB  
/BFDACNM,LREC=80,BKSZ=3200,RCFM=FB,FORG=PS  
[PROGRAM EXECUTION]  
/BFOTACNM,LABL=/NL  
/BEQJ
```

The FD card for the file having access name =ACNM assures that the file will be properly blocked, etc. The "PROGRAM EXECUTION" is assumed to then write 80-column card images to file ACNM. The FOT (File Out to Tape) statement accomplishes the file transfer to an unlabeled NRL scratch tape. The user should check the Job Activity File output to ascertain the reel number of the scratch tape used. This number is important and must be recorded. After the file transfer has been successfully completed (i.e., the user's file has been cataloged on the 66/6700), the tape may be re-used by specifying the reel number via the "EFID=" parameter on the FOT statement.

A JSL setup to read a file sent from DTNSRDC would look like this:

```
/BJOB  
/BFDACNM,LREC=80,BKSZ=3200,RCFM=FB,FORG=PS  
/BFITACNM,EFID=XXXXXX,LABL=/NL  
[PROGRAM EXECUTION]  
/BEQJ
```


Here the FIT (File In from Tape) card functions to make the tape file accessible to the program (XXXXXX is the tape reel number).

Files containing left and right brackets ([and]) must have the brackets converted to a special CDC-compatible code before they are put on tape. Files containing RATFOR programs usually present this situation. A TIASC MACRO program called BRACKET does this conversion and is described in Appendix 2.

THE TAPE COPY PROCEDURE

DTNSRDC users initiate a tape copy by submitting a completed tape-to-tape request form at the CDC-6400 work submittal counter in Building 191 (blank forms are available at the counter). The tape must have a label affixed to identify it.

Appendix 3 contains some tape-to-tape request forms completed with sample information. Sample 1 instructs the operator that the NRL tape is to be copied onto the tape at DTNSRDC. Samples 2 and 3 show how to have the DTNSRDC tape copied onto a tape at NRL. The information on Sample 2 indicates that the user does not have a tape at NRL. In this situation a scratch tape at NRL would be assigned and the operator would record the reel number on the user's tape copy form. Sample 3 would apply if the user already has a tape at NRL.

APPENDIX 1

TICOPY

TICOPY is a CDC BEGIN/REVERT procedure to facilitate file transfer between the NRL TIASC and the DTNSRDC CDC 6700. TICOPY has two modes of operation, depending upon the direction of the file transfer. In the TI2CDC mode, it copies a tape which was written by the TI terminal tape drive onto a CDC permanent file. In the CDC2TI mode, it copies a CDC permanent file onto a TI-compatible tape file. The TICOPY call card may be issued on the 66/6700, due to limited availability of 9-track tape drives. The TICOPY call card format is as follows:

BEGIN,MYPRO,,CACD,TICOPY,MODE,NFILES,ID,CODE,AC,FILNAM,VSN,SLOT.

where MODE is either TI2CDC or CDC2TI

NFILES is either EOI (copy to end of information) or

NF (copy N files)

CODE is the user's branch code

AC is a valid 10-digit access number

FILNAM is the filename of the CDC permanent file (10 alphanumeric characters; see CONVENTIONS, below).

VSN is a visual label on the reel of tape.

SLOT is the tape's slot number in the CDC 6700 stranger tape log (2 digits).

CONVENTIONS AND RESTRICTIONS

- 1) All files must be in 80-column card image format.
- 2) All tapes are unlabeled, 800 BPI.
- 3) The TI tapes (incoming) must have LREC=80,BK SZ=3200,RCFM=FB,FORM=PS.
(This is automatically done for tapes produced by TICOPY.)
- 4) The CDC permanent file will be named [ID][FILNAM]ASC,ID=[ID],XR=[ID] when TICOPY is in the TI2CDC mode. In the CDC2TI mode it will expect the permanent file name on the 6700 to be [ID][FILNAM]ASC,ID=[ID].

APPENDIX 2

BRACKET

The BRACKET MACRO on the TIASC is used to convert EBCDIC files to be sent or received from DTNSRDC CDC-6000 equipment. It is only needed if the files contain brackets ([and/or]). Files containing RATFOR code nearly always need to be processed by BRACKET on the TIASC. In TI2CDC mode BRACKET accepts a TIASC file containing brackets and produces another file containing the proper CDC code for brackets. In CDC2TI mode it does just the opposite. Characteristics of these files are given below.

BRACKET CALL CARD FORMAT:

`/BRACKET MODE,INFILE,OUTFILE`

where MODE is either TI2CDC or CDC2TI

INFILE is the access name of the file to be converted. This file must have LREC=80.

OUTFILE is the access name of the file to be produced. OUTFILE has the following characteristics: LREC=80, BKSZ=3200, FORG=PS, RCFM=FB, BAND=2/10/2

The BRACKET MACRO may be accessed after entering the following macro assignment command.

`/MACASG MACRO,USERCAT/D42/B20/MORAP1/MACLIB`

APPENDIX 3

SAMPLE TAPE-TO-TAPE REQUEST FORMS

TAPE TO TAPE REQUEST FORM

NAME: ✓

USERCODE: _____ ACCOUNT NO.: _____ EXPIRATION DATE: _____
(NEEDED ONLY IF SENDING TO SCRATCH TAPE AT ASC SITE)

ID OF TAPE BEING SENT: ✓ SOURCE LOCATION: ASC
(VSN OR OTHER LABEL) (ASC OR RJE?)

ID OF TAPE BEING WRITTEN: ✓ DESTINATION LOCATION: RJE
(VSN, SCRATCH, OR OTHER LABEL) (ASC OR RJE?)

VSN OF NEWLY REGISTERED TAPE: _____

*DENSITY OF TAPE BEING WRITTEN: 800 [to be compatible with TICOPY]
(1600 OR 800 BPI)

AMOUNT OF TAPE TO TRANSFER:

A) NUMBER OF FILES: ✓ (GIVE NUMBER)

OR

B) TO DOUBLE END OF FILE: _____

OR

C) TO END OF DATA: _____

*THE DENSITY OF THE INPUT TAPE IS DETERMINED BY THE T2T SOFTWARE.
THE DENSITY OF THE TAPE BEING WRITTEN CAN DIFFER FROM THE DENSITY
OF THE TAPE BEING READ.

SAMPLE 1 - Transfer of a data file on tape at NRL to DTNSRDC

TAPE TO TAPE REQUEST FORM

NAME: ✓

USERCODE: ✓ ACCOUNT NO.: ✓ EXPIRATION DATE: ✓
(NEEDED ONLY IF SENDING TO SCRATCH TAPE AT ASC SITE)

ID OF TAPE BEING SENT: ✓ SOURCE LOCATION: RJE
(VSN OR OTHER LABEL) (ASC OR RJE?)

ID OF TAPE BEING WRITTEN: SCRATCH DESTINATION LOCATION: ASC
(VSN, SCRATCH, OR OTHER LABEL) (ASC OR RJE?)

VSN OF NEWLY REGISTERED TAPE: [will be completed by operator]

*DENSITY OF TAPE BEING WRITTEN: ✓
(1600 OR 800 BPI)

AMOUNT OF TAPE TO TRANSFER:

A) NUMBER OF FILES: ✓ (GIVE NUMBER)
OR

B) TO DOUBLE END OF FILE: _____
OR

C) TO END OF DATA: _____

*THE DENSITY OF THE INPUT TAPE IS DETERMINED BY THE T2T SOFTWARE.
THE DENSITY OF THE TAPE BEING WRITTEN CAN DIFFER FROM THE DENSITY
OF THE TAPE BEING READ.

SAMPLE 2 - Transfer of a data file on tape at DTNSRDC to an
NRL Scratch Tape

TAPE TO TAPE REQUEST FORM

NAME: ✓

USERCODE: _____ ACCOUNT NO.: _____ EXPIRATION DATE: _____
(NEEDED ONLY IF SENDING TO SCRATCH TAPE AT ASC SITE)

ID OF TAPE BEING SENT: ✓ SOURCE LOCATION: RJE
(VSN OR OTHER LABEL) (ASC OR RJE?)

ID OF TAPE BEING WRITTEN: ✓ DESTINATION LOCATION: ASC
(VSN, SCRATCH, OR OTHER LABEL) (ASC OR RJE?)

VSN OF NEWLY REGISTERED TAPE: _____

*DENSITY OF TAPE BEING WRITTEN: ✓
(1600 OR 800 BPI)

AMOUNT OF TAPE TO TRANSFER:

A) NUMBER OF FILES: ✓ (GIVE NUMBER)

OR

B) TO DOUBLE END OF FILE: _____

OR

C) TO END OF DATA: _____

*THE DENSITY OF THE INPUT TAPE IS DETERMINED BY THE T2T SOFTWARE.
THE DENSITY OF THE TAPE BEING WRITTEN CAN DIFFER FROM THE DENSITY
OF THE TAPE BEING READ.

SAMPLE 3 - Transfer of a data file on tape at DTNSRDC to an
NRL tape which has been previously registered.

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